

What we claim is:

1. An apparatus for manufacturing a see-through type headrest, said see-through headrest comprising a doughnut-shaped surface material having a see-through hole passing through its center part and a foamed body integrated with said surface material by injecting and expanding a foaming material inside said surface material,

the apparatus comprising:

an upper mold;

a lower mold; and

a core block having an outline corresponding to said see-through hole of said see-through type headrest,

wherein said core block is detachable from said upper and lower molds, and a space corresponding to the final desired shape of said see-through type headrest is formed inside those molds when said core block is positioned in said upper or lower mold and said upper and lower molds are then clamped.

2. The apparatus of claim 1 including means for positioning said core block inside said upper and lower molds.

3. The apparatus of claim 1 wherein said core block is made of a material selected from a group consisting of metal, alloy, foaming resin, thermoplastic resin, thermosetting resin, ceramics and glass.

4. A molding apparatus for manufacturing a core block used in a see-through type headrest manufacturing apparatus for manufacturing a see-through type headrest,

said see-through headrest comprising:

a doughnut-shaped surface material having a see-through hole passing through its center part; and

a foamed body integrated with said surface material by injecting and expanding a foaming material inside said surface material,

said see-through type headrest manufacturing apparatus comprising:

an upper mold;

a lower mold; and

said core block having an outline corresponding to said see-through hole of said see-through type headrest,

wherein said core block is detachable from said upper and lower molds, and a space corresponding to the final desired shape of said see-through type headrest is formed inside those molds when said core block is positioned in said upper or lower mold and said upper and lower molds are then clamped,

the molding apparatus comprising a split mold type molding apparatus, a space corresponding to an outline of said core block being formed inside the molding apparatus.

5. The molding apparatus of claim 4 wherein said split mold type molding apparatus comprising:

an upper mold;

a lower mold; and

two split molds, a space corresponding to an outline of said core block being formed inside those molds.

6. A method for manufacturing a see-through type headrest using a see-through type headrest manufacturing apparatus,

said see-through headrest comprising:

a doughnut-shaped surface material having a see-through hole passing through its center part; and

a foamed body integrated with said surface material by injecting and expanding a foaming material inside said surface material,

said apparatus comprising:

the apparatus comprising:

an upper mold;

a lower mold; and

a core block having an outline corresponding to said see-through hole of said see-through type headrest,

wherein said core block is detachable from said upper and lower molds, and a space corresponding to the final desired shape of said see-through type headrest is formed inside those molds when said core block is positioned in said upper or lower mold and said upper and lower molds are then clamped,

the method comprising the steps of:

providing said surface material having said see-through hole passing through its center part and having a slot in its bottom , by sewing pieces together;

inserting an upper part of a U-shaped stay in an inner space of said surface material through said slot;

attaching a holder plate to said stay by passing two legs of said stay through two holes of said holder plate;

inserting an edge portion of said slot in a gap between an upper plate and a lower plate of said holder plate, so that said surface material is held in said holder plate attached to said stay, thereby completing a skin-skeleton assembly;

fitting said core block in said see-through hole of said surface material of said skin-skeleton assembly, thereby completing a skin-skeleton-core assembly;

setting said skin-skeleton-core assembly in said apparatus, said core block of said skin-skeleton-core assembly being positioned in said upper or lower mold of said apparatus;

clamping said upper and lower molds;

injecting a foaming material in an inner space of said surface material through an injector nozzle inserted through and attached to an injector attaching mouth of said holder plate, so that said foaming material expands and cures

inside said surface material, and thereby, said foamed body made of said foaming material is integrated with the surface material; and

releasing said surface material integrated with said foamed body from said apparatus.

7. The method of claim 6 including the step of releasing said core block from said surface material integrated with said foamed body.